Phenotyping Symposium PhenoVeg 2023

September 26 and 27, 2023

Venue: World Vegetable Center, 60 Yi Min Liao, Shanhua, 74155, Tainan, Taiwan

Preliminary Program

26 September, Tuesday		
09:30-10:00	Registration and Welcome Coffee	
10:00-10:20	Welcome, Opening Remarks, Introduction	
Sensors, cameras & automatization		
10:20-11:00	Novel sensors to advance plant phenotyping	Onno Muller, Forschungszentrum Jülich, Germany
11:00-11:40	DIY Plant Phenotyping: Application of digital phenotyping techniques in plant research and breeding	Sachiko Isobe, Kazusa DNA Research Institute, Japan
11:40-12:10	Establishment and application of crop phenotyping system in the National Crop Phenomics Center of Korea	Hyeonso Ji, National Institute of Agricultural Sciences, Korea
12:10-13:10	Lunch break	Cafeteria
	Big Data and deep learning, modeling	
13:10-13:50	Leveraging AI/ML to Address Critical Challenges in Plant Phenotyping Research	Jennifer Clarke, University of Nebraska - Lincoln, USA
13:50-14:20	A deep learning model to detect the early drought stress status of tomato (*Solanum lycopersicum*)	Yuan-Kai Tu, Taiwan Agricultural Research Institute, Taiwan
14:20-14:50	Reducing data analysis threshold for plant phenomics: a visual analysis tool for smooth and extraction of traits analysis	Cheng-Bin Li, Taiwan Agricultural Research Institute, Taiwan

14:50-15:10	Automated chilli phenotyping using deep learning approaches	Smitha V. Kurup, Mahyco, India
15:10-16:00	Coffee break and poster viewing	
16:00-16:30	Empowering breeders and researchers: Leveraging automated plant phenotyping system in vegetable crops	Wei-ling Chen, Taichung District Agricultural Research and Extension Station, Taiwan
16:30-17:00	Drought-stressed or diseased? Using physiological indices to detect a disease infection in precision agriculture: Implications for phenotyping	Hyungmin “Tony” Rho, National Taiwan University, Taiwan
17:00-17:30	Establish an Evaluation System of Thermotolerant Phenotype in Tomatoes under Heat Stress	Yu-Chang Tsai, National Taiwan University, Taiwan
18:00-21:00	*Symposium Dinner*	
27 September, Wednesday		
Phenomics enabled plant research and breeding		
09:00-09:40	Using advances in phenotyping technology to develop climate-ready crops for the future	Owen Atkin, Australian National University, Australia
09:40-10:10	Using machine learning for early detectionof heat responses: Insights from natural sunlight hyperspectral imaging at theed edge	Po-xing Zheng, Academia Sinica, Taiwan
10:10-10:40	Phenomics approach for identifying superior rootstocks for drought tolerance of grafted tomato	Pratapsingh S. Khapte, Indian Council of Agricultural Research, India
10:40-11:00	Coffee break and poster viewing	
11:00-11:40	Automatic stomata detection and measurement for plant abiotic responses	Yao-Cheng Lin, Academia Sinica , Taiwan
11:40-12:10	Application of plant phenomics platform for automatic phenotyping in the vegetable crops	Ssu-Yu Lin, Taiwan Agricultural Research Institute, Taiwan

12:10-13:10	Lunch break	
13:10-13:50	Application of AI on UAV images to identify rice growth and maturity	Ming-Der Yang , National Chung Hsing University, Taiwan
13:50-14:20	Phenomics as a breeding tool	Ya Ping Lin, World Vegetable Center, Taiwan
14:20-14:50	Stability and performance evaluation of *Brassica oleracea* germplasm for indoor vegetable breeding using high-throughput phenotyping approach (PlantEye)	Ting Xiang Neik, National University of Singapore, Singapore
14:50-15:00	Closing	
15:00-16:00	WorldVeg Tour (Facilities, Demo Garden, Coffee)	